

2009-10 Catalog Description: Group Study

Prerequisites: None

Textbook: AutoCAD and It's Applications – Basics 2009 Edition
By: Terence M. Shumaker / David A. Madsen / David P. Madsen
ISBN: 978-1-59070-988-7

Materials: One folder *with pockets* that will be used to turn in homework

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Course Objectives:

The Student successfully completing this course will be able to demonstrate AutoCAD skills in:

1. Drawing setup, working with multiple drawings
2. Drawing lines, basic shapes, geometric constructions
3. Basic and advanced editing of drawing objects
4. Creating and managing layers
5. Using drawing aids and display options
6. Placing text on drawings, inserting and editing tables
7. Obtaining information about the drawing
8. Creating and editing dimensions
9. Creating layouts, templates, and plotting drawings
10. Using annotative objects
11. Using graphic patterns in AutoCAD
12. Creating symbols
13. Inserting and managing external references
14. Defining attributes
15. Creating isometric drawings

Course Topics:

1. Working with multiple drawings; templates.
2. Introduction to Drawing and Editing: Line conventions; methods of drawing lines; canceling commands; introduction to editing.
3. Using Layers, Modifying Object Properties, and Making Prints: Introduction to layers; modifying properties of objects; plotting.
4. Drawing Basic Shapes: Drawing circles, arcs, ellipses, polygons, rectangles.
5. Drawing Display Options: Getting close to your work; moving around the display screen; creating views.
6. Object Snap and AutoTrack: Concepts and use.
7. Geometric Constructions and Multiview Drawings: Drawing parallel lines; construction lines, curves, and points; orthographic multi-view drawings.
8. Placing Text on Drawings: Text standards; AutoCAD text fonts and styles; single-line text; multi-line text; text properties; checking your spelling.
9. Working with Tables: Inserting and editing tables; table styles.
10. Basic Editing Commands: Drawing chamfers, fillets, trimming, extending, moving, copying objects
11. Automatic Editing: Automatic editing with grips; the Properties window.
12. Obtaining Information about the Drawing: Finding the area of shapes and objects; the distance between two points; listing drawing data.
13. Basic Dimensioning Practices: Dimension arrangement; styles; editing.
14. Creating layouts in paper space and plotting: Creating and managing layouts; creating viewports.
15. Annotative objects: Defining, drawing, and displaying annotative objects; multi-view drawings.
16. Section views and graphic patterns: Drawing and editing graphic patterns; using Design Center and tool palettes.
17. Blocks: Creating and inserting blocks into your drawing.

18. Attributes: Assigning attributes to your blocks; attribute extraction.
 19. External references: Placing and managing externally referenced drawings.

Class / laboratory schedule: Two hours of class lecture and two hours of laboratory per week.

ENGR496 ASSIGNMENTS

Class	Chapter Title / Topic	Assignments	Due
8/24	Intro to Class		
8/24	AutoCAD Review Introduction to AutoCAD Chapter 1		
8/26	AutoCAD Review (con't) Working with Drawings and Templates Chapter 2	Template drawing – Engineering Inch Template drawing – Engineering Foot	9/02 9/02
8/31	AutoCAD Review (con't) Introduction to Drawing and Editing Chapter 3	Problem #3 Problem #10 Problem #12	9/09 9/09 9/09
8/31	AutoCAD Review (con't) Basic Object Tools Chapter 4	Problem #3 Problem #5 Problem #13	9/09 9/09 9/09
9/02	LAB		
9/07	University Holiday – No classes		
9/09	Line Standards and Drawing Format Chapter 5	Problem #8	9/16
9/09	Display Options Chapter 6	No Assignment	
9/14	Object Snaps and AutoTracking Chapter 7	Problem #1 Problem #3 Problem #6	9/21 9/21 9/21
9/14	Construction Tools and Multiview Drawings Chapter 8	Problem #3 (Include center lines) Problem #7 (Include center lines)	9/21 9/21
9/16	LAB		
9/21	Text Styles and Multiline Text Chapter 9	Problem #4 or 5 (CHOOSE ONE)	9/28
9/21	Single-Line Text and Additional Text Tools		

	Chapter 10	No Assignment	9/28
9/21	Working with Tables Chapter 11	Problem #1, 3, or 4 (CHOOSE ONE)	9/28
9/23	LAB		
9/28	Basic Object Editing Tools Chapter 12	Problem #7 Problem #10	10/05 10/05
9/28	Arranging and Patterning Objects Chapter 13	Problem #12 or 15 (CHOOSE ONE)	10/05
9/30	LAB		
10/05	Using Grips, Properties, and Quick Select Chapter 14	Problem #9	10/12
10/05	Obtaining Drawing Information Chapter 17	Problem #12 Problem #17 (Be sure to read the instructions for BOTH problems – type answers on the drawing)	10/12 10/12
10/07	LAB		
10/12	Dimension Standards and Styles Chapter 18		10/19
10/12	Linear and Angular Dimensioning Chapter 19	Problem #4 Problem #10	10/19 10/19
10/12	Dimensioning Features and Alternate Practices Chapter 20	Problem #1 (HINT - Be sure to read the instructions for the problem)	10/19
10/12	Editing Dimensions Chapter 21	Problem #2 (HINT - Be sure to read the instructions for the problem)	10/19
10/14	LAB		
10/19	MIDTERM EXAM – Model Space – Study Chapters 1-14, 17-21		
10/19	Student Project Assignment Discussion		
10/19	Working with Layouts Chapter 28		
10/19	Plotting Layouts Chapter 29	Paper Space Template Assignment	10/26
10/21	LAB		

10/26	Annotative Objects Chapter 31	Annotative Objects Assignment (40 Points) (Two Sheets to Hand In)	11/02
10/28	LAB		
11/02	Section Views & Graphic Patterns Chapter 24	Graphic Patterns Assignment	11/09
11/02	Creating Symbols for Multiple Use Chapter 26	Symbols & Blocks Assignment	11/09
11/02	Creating and Using Dynamic Blocks Chapter 27	No Assignment	
11/04	LAB		
11/09	Using Attributes Chapter 30	Attributes Assignment #1 Attributes Assignment #2	11/16 11/16
11/11	LAB		
11/16	External Reference Drawings Chapter 32	External Reference Assignment	11/30
11/18	LAB		
11/21 - 11/29 Fall Break – NO CLASSES			
11/30	LAB – Project Work Day		
12/02	LAB – Project Work Day		
12/07	FINAL EXAM – Paper Space – Study Chapters 24, 26, 27, 28, 29, 30, 31, 32		
12/07	LAB – Project Work Day		
12/09	STUDENT PROJECT DUE AT END OF CLASS (Last Class)		
12/11	(Friday) Fall Classes End		

EXPECTATIONS, POLICIES, AND PROCEDURES

1. **Drawing assignments.** Your drawing assignments will be found at the end of the assigned chapters or will be handed out to you during class. All drawing assignments must be plotted on a minimum A-size sheet that includes the following minimum information: Sheet border and title block with the appropriate information (to be discussed). I prefer all assignments are handed in enclosed in a folder **with pockets** – no manila file folders. *In addition*, all drawing assignments (the .dwg files) must be emailed to me at the email address stated on page one of this syllabus.
2. **Late Assignments.** A due date is stated on the syllabus for all assignments. Assignments received after the stated due date will be considered late and are therefore subject to a loss of ½ the total point value of the assignment. Seriously late assignments will not be accepted.
3. **Reworking Assignments.** All students have the opportunity to rework (redline) any assignments for which full credit was not received. Reworked assignments must be resubmitted within one (1) week after the due date. Late reworked assignments will not be accepted. Please submit the corrected drawing along with the previously graded drawing.
4. **Student Project.** Each student is required to do a class project. The project drawing file must be started using the version of AutoCAD software currently taught in the classroom, and must utilize the topics covered in this class. More information will be provided later in the semester. The student project assignment will be worth 100 points.
5. **Exams.** There will be two exams for this class. A Midterm Exam and a Final Exam. Questions will be a combination of multiple choice and true / false. There will be no practical drawing problem.
6. **Class attendance.** If you miss a class, it is your responsibility to ask for any handouts and to get information / notes from classmates relative to the class. Topics covered will not be re-lectured.
7. **This syllabus is subject to change or modification.**

Drawing Assigns (33)	740 Points
Midterm Exam	50 Points
Final Exam	100 Points
Student Project	<u>100 Points</u>

Total points possible: 990 Points

<u>Grade*</u>	<u>Points Earned</u>	<u>Percentage</u>
A	990 - 891	100% - 90%
B	890 - 792	89.9% - 80%
C	791 - 693	79.9% - 70%
D	592 - 594	69.9% - 60%
F	593 - below	59.9% - 0%

* The +/- system will NOT be used.